
*A Partnership to Restore and Protect the Sound*

**EPA-LONG ISLAND SOUND OFFICE/NEW YORK SEA GRANT/CONNECTICUT SEA GRANT PARTNERSHIP FOR LONG ISLAND SOUND ENVIRONMENTAL RESEARCH**

***Interagency Announcement of Opportunity for Grants on***

# 2001 Long Island Sound Research - Request for Preliminary Proposals

**OPENING DATE: July 1, 2001** **CLOSING DATE: August 3, 2001**

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## 1.0 INTRODUCTION

### *1.1 Background*

The Environmental Protection Agency-Long Island Sound Office (EPA-LISO), Connecticut Sea Grant (CTSG), and the New York Sea Grant (NYSG) announce their intent to support research on Long Island Sound in support of the Long Island Sound Study (LISS), a regional, community-based, partnership to protect and restore Long Island Sound. Information on the LISS can be obtained at www.epa.gov/region01/eco/lis.

EPA-LISO, CTSG, and NYSG are cooperating to initiate this extramural grants program using federal fiscal year 2001 funds. The initiative will continue the joint awards competition in future years pending funding availability.

EPA-LISO, CTSG, and NYSG, anticipate awarding approximately $400,000 of fiscal year 2001 funds. Projects may extend for two years of work, but projects of one year duration are also welcome. The ideal award range will be from $30,000 to $60,000 per year but awards up to $100,000 per year will be considered. **Total requested funding may not exceed $200,000. Proposals that exceed this amount will be returned without review.**

Awards made through this competition are dependent upon responsiveness of the proposals to the announcement, the quality of the proposed research, and the availability of funds. Proposals in response to this announcement must be received by August 3, 2001. **Awards will be made in Fiscal Year 2002**. Awards resulting from this competition may be made by EPA, CTSG, and NYSG at the option of the agencies, not the grantee.

Further information, if needed, may be obtained from the EPA-LISO, CTSG, and NYSG, officials indicated below. E-mail inquiries are the preferred communication method.

**Mr. Mark Tedesco, Director**
**EPA Long Island Sound Office**
**tedesco.mark@epamail.epa.gov**
**voice (203) 977-1541**

**Dr. Edward Monahan, Director**
**Connecticut Sea Grant**
**sgoadm01@uconnvm.uconn.edu**
**voice (860) 405-9128**

**Dr. Jack Mattice, Director**
**New York Sea Grant**
**jmattice@notes.cc.sunysb.edu**
**voice (631) 632-6905**

### *1.2 Related Announcements*

Applicants should be aware of another funding opportunity through the Long Island Sound Fund. The Long Island Sound Fund, administered by the Connecticut Department of Environmental Protection, is supported by the sale of Preserve the Sound license plates, in addition to private donations, and a percentage of purchases from the People's Bank *Preserve the Sound* affinity credit card. The LIS Fund provides small grants to non-profit organizations, educational institutions, and state and local governments in four general categories: public access, public education and outreach, habitat restoration, and research specifically relating to Long Island Sound and its tributaries. In general, the recommended maximum funding per project is $25,000. The next annual request for proposals for this competitive grants program is expected to be released in January, 2002. For more information or to be placed on the RFP mailing list, contact Kate Hughes, Long Island Sound Fund Coordinator at the Connecticut Department of Environmental Protection, at 860-424-3034 or kate.hughes@po.state.ct.us.

## 2.0 TOPICS

### *2.1 Introduction*

This announcement has a special emphasis on eutrophication, hypoxia, and related ecosystem impacts. Hypoxia affects the bottom waters of the Sound each summer. Inadequate oxygen levels render large areas of the Sound's bottom, extending at its maximum extent from New York City to New Haven, Connecticut and Port Jefferson, New York, unfit for many marine species. Nitrogen loading stimulates excessive algae growth throughout the Sound. Decomposition of the organic matter produced by the algae blooms consumes oxygen from the water in the Sound.

In April 2001, the EPA approved the Total Maximum Daily Load (TMDL) to achieve water quality standards for dissolved oxygen in Long Island Sound that was developed by the Connecticut Department of Environmental Protection (CT DEP) and the New York State Department of Environmental Conservation (NYSDEC) through the LISS. Section 303 (d) of the Clean Water Act requires the development of TMDLs to reduce pollutant loadings to levels that will achieve water quality standards. The TMDL builds upon the 1998 state/EPA agreement to cut nitrogen loads to Long Island Sound by 58.5 percent by 2014 by allocating responsibility among individual point sources, such as sewage treatment plants, and nonpoint sources, such as stormwater runoff. The TMDL also includes a comprehensive strategy to adapt the management program to new information from research and monitoring data, modeling studies, and technology improvements.

This request for preliminary proposals focuses on studies to better understand the processes leading to the eutrophication of Long Island Sound, effects, and the trajectory of change as nitrogen reductions are implemented. Emphasis is on effects on the planktonic and benthic communities and the food chain leading to higher trophic level impacts. Research proposals on this topic and on other topics highlighted in the section below are encouraged.

### *2.2 Research Priorities*

This competition is targeted to Long Island Sound research on the topics listed below.

- **Nutrient and phytoplankton dynamics**. Trends in the type, amounts, and relative abundance of nitrogen, phosphorus, silica, and phytoplankton on annual and decadal scales, and from episodic events. This includes changes in the relative abundance of different phytoplankton assemblages over time, e.g., diatoms versus dinoflagellates using the sediment record and/or other methods
- **Factors controlling the timing, intensity, and fate of primary production**. This includes how the timing, composition, and amount of nutrients affect the dominance of vascular plants, macroalgae, and phytoplankton as primary producers, and influence phytoplankton assemblages and productivity.
- **Mechanisms by which hypoxia develops**. The relationships between primary and secondary production, transformations of organic matter, trophic interactions and food web dynamics, benthic-pelagic coupling, and pelagic-pelagic interactions.
- **Benthic processes and elemental cycling**. This includes releases of hydrogen sulfide and ammonia during hypoxic events.

- **Factors affecting the distribution, abundance, and trends of recreationally, commercially, or ecologically important living resources**. Emphasis is on the natural and anthropogenic factors controlling larval, juvenile, and adult stages.
- **Submerged aquatic vegetation**. Determine the role of nitrogen loadings in habitat degradation (i.e., loss of eelgrass, increases in benthic algae and floating algae) in Long Island Sound coves and embayments. Develop watershed models similar to those developed for Waquoit Bay to evaluate groundwater nitrogen loads, present loading, and future loads from long term development. Specific areas to be investigated include, but are not limited to: 1)ground water nitrogen sources to southeastern CT coves and embayments and north shore Long Island embayments and 2) the role of sewage treatment plant nitrogen loads to the Pawcatuck River in eelgrass declines in Little Narragansett Bay and reports of benthic algae growth and massive Ulva beds (in the river).
- **Development of ecological indicators of the health of Long Island Sound**. These indicators will be related to, or derived from, measurements of variables that provide quantitative information on ecological structure and function. The indicator must be responsive to anthropogenic stressors and clearly link to important societal values for the targeted resources. These may include indicators of current or future ecological condition and indicators that contribute information for understanding the causes of ecological impairment.
- **Management of nutrient sources.** Research on point and nonpoint (including atmospheric deposition) sources on nutrients, management practices, and innovative technologies for their control.
- **Sea level rise impacts.** Accelerated sea level rise is implicated in tidal wetland (typically intertidal marsh) losses in Westchester, Nassau, Suffolk, and Fairfield Counties and the loss of emergent plants in the Quinnipiac River wetlands. Determine the role of sea level rise in wetland losses versus sediment disruptions, hydrologic modifications, and other potential causes and establish additional (beyond Barn Island in Stonington) SET (sediment erosion table) stations to gage wetland losses and sea level rise changes.
- **Innovative research**. Projects that apply innovative approaches to investigate causes of impairment to Long Island Sound and identify possible management responses.

Research should be integrated with the needs of decision-makers in order to identify areas where improved understanding is needed and to develop models needed for management of Long Island Sound. The most competitive proposals will be those that help integrate multiple management goals of EPA, LISS partners, CTSG, and NYSG programs.

## 3.0 ELIGIBILITY

Academic and not-for-profit institutions located in the U.S., and state or local governments are eligible for funding by EPA, CTSG, and NYSG. Profit-making firms and federal agencies are not eligible for funding. Personnel in profit-making firms may participate as non-funded, co-investigators or through subcontracts with the awardee institution.

Federal employees may cooperate or collaborate with eligible applicants within the limits imposed by applicable legislation and regulations. However, federal agencies, national laboratories funded by federal agencies (FFRDCs), and federal employees are not eligible to submit applications to this program and may not serve in a principal leadership role on a grant. Under exceptional circumstances the principal investigator's institution may subcontract to a federal agency or FFRDC to purchase unique supplies or services unavailable in the private sector. Examples are purchase of satellite data, census data tapes, chemical reference standards, unique analyses or instrumentation not available elsewhere, etc. A written justification for such federal involvement must be included in the application, along with an assurance from the federal agency that commits it to supply the specified service. Federal employees may not receive salaries or in other ways augment their agency's appropriations through grants made by this program.

EPA, CTSG, and NYSG welcome applications on behalf of all qualified scientists, engineers, and other professionals and strongly encourage women, minorities, and persons with disabilities to compete fully in any of the programs described in this announcement.

In accordance with Federal statutes and regulations and EPA, CTSG, and NYSG policies, no person on grounds of race, color, age, sex, national origin, or disability shall be excluded from participation in, denied the benefits of, or be subjected to discrimination under any program or activity receiving financial assistance from EPA, CTSG, and NYSG.

## 4.0 INSTRUCTIONS FOR PRELIMINARY PROPOSAL SUBMISSION

### *4.1 The Preliminary Proposal*

The preliminary proposal is made through the submission of the materials described below. It is essential that the proposal contain all the information requested and be submitted in the formats described. Preliminary proposals will be reviewed by a panel established by the LISS. The preliminary proposals will be reviewed on a programmatic, non-technical basis to ascertain relevancy to the issues and priorities identified in Section 2.0 of this announcement. Applicants will be notified by September 1, 2001 whether or not the submission of a full proposal is encouraged. Invitation to submit a full proposal does not constitute an indication that the proposal will be funded. Interested parties who are not invited to submit full proposals will not be precluded from submitting full proposals if they have submitted a preliminary proposal in accordance with the procedures described. Guidelines for the submission of full proposals will accompany the invitation to submit full proposals. If an applicant is chosen for award (i.e., after external peer review and internal review of the full proposal), additional documentation and forms will be requested by the agency that will manage the award to satisfy their grant application requirements. The preliminary proposal must be single or double spaced, typewritten in at least 12-point font on letter size paper with 1-inch margins, and contain the following:

1. **Signed title page**: The title page should be signed by the Principal Investigator (PI) and should clearly identify the research areas addressed. PIs should be identified by affiliation

and contact information. The total amount of requested funds and matching funds should be listed as well as the source of matching funds.

2. **Project Description**: A concise (3-page limit) description of the proposed project and its relevance to the requested topic areas. The project description should include an introduction, objectives, statement of hypothesis, brief methodology, and discussion of anticipated usefulness of the project to understanding or managing Long Island Sound.

3. **Curriculum Vitae**: One-page C.V. for the PI(s) and key co-investigators.

### *4.2 How to Apply*

One original and nine copies of the preliminary proposal must be received by EPA-LISO no later than **4:00 P.M. EDT** on **August 3, 2001.** No fax or email submissions will be accepted. Completed proposals must be sent to:

U.S. Environmental Protection Agency
Long Island Sound Office
Stamford Government Center
888 Washington Boulevard
Stamford, CT 06904-2152

## 5.0 REVIEW AND SELECTION

### *5.1 Review Procedures*

Preliminary proposals will be reviewed by a panel established by the LISS. The preliminary proposals will be reviewed on a programmatic, non-technical basis to ascertain relevancy to the issues and priorities identified in Section 2.0 of this announcement and the degree to which the research components relate to management issues in Long Island Sound. The LISS panel will determine which investigators will be invited to submit full proposals. Potential investigators will be notified by September 1, 2001 whether the submission of a full proposal is encouraged. Invitation to submit a full proposal does not constitute an indication that the proposal will be funded. Interested parties who are not invited to submit full proposals will not be precluded from submitting full proposals if they have submitted a preliminary proposal in accordance with the procedures described.

### *5.2 Additional Considerations*

Matching Contributions
Matching funds of at least 25 percent are recommended. In general, higher levels of matching funds will be considered favorably in project assessments.

### *5.3 Overall Time line*

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| July 1, 2001 | Request for preliminary proposals |
| August 3, 2001 | Preliminary proposals due |
| September 1, 2001 | Full proposals invited |
| October 12, 2001 | Full proposals due |
| December 1, 2001 | Successful applications notified and award application process begins |
| January 15, 2002 | Completed grant applications submitted to EPA/Sea Grant |

### *5.4 Proprietary Information*

By submitting an application in response to this solicitation, the applicant grants EPA, CTSG, and NYSG permission to share the application with reviewers both within and outside the Agencies. Applications containing proprietary or other types of confidential information will not be reviewed.

## 6.0 GRANT ADMINISTRATION

### *6.1 EPA Grant Administration*

The funding mechanism for all awards issued under this solicitation by EPA will consist of grants and depend on the availability of funds. In accordance with Public Law 95-224, the primary purpose of a grant is to accomplish a public purpose of support or stimulation authorized by Federal statute rather than acquisition for the direct benefit of the Agency. In issuing a grant agreement, EPA anticipates that there will be no substantial EPA involvement in the design, implementation, or conduct of the research funded by the grant. However, EPA will monitor research progress, based in part on annual reports provided by awardee.

### *6.2 CTSG and NYSG Grant Administration*

CTSG and NYSG grants awarded as a result of this announcement will be administered in accordance with the standard terms and conditions that pertain to all awards made via these Sea Grant Program's host universities.